

Listing of Claims:

1. (Currently Amended) An interlayer for placement on a paved surface, ~~consisting of~~ comprising a mixture of:

aggregate comprised of no more than about 15% by weight natural sand, wherein said aggregate is comprised of about 50% by weight to about 99.8 % by weight aggregate having a sieve size of less than about 4.75 mm; and

an asphalt binder ~~a petroleum-based asphalt binder~~, wherein said interlayer has a Hveem Stability at 60°C and 50 gyrations of at least about 22 and a Flexural Beam Fatigue of at least about 50,000 cycles at 2000 micorstrains, 10 Hz, $3.0 \pm 2.0\%$ air voids, at 0-30°C.

2. (Currently Amended) The interlay of claim 1, wherein said asphalt binder is a polymer modified asphalt binder ~~wherein the polymer with which the asphalt binder is modified is a polymer that is traditionally used to modify an asphalt binder for use in paving surfaces.~~

3. (Previously Presented) The interlayer of claim 1, wherein said interlayer is about 0.5 to 2 inches thick on a paved surface.

4. (Previously Presented) The interlayer of claim 1, wherein said binder is chosen based on the temperature associated with the regional climate.
5. (Previously Presented) The interlayer of claim 1, wherein said binder is chosen from a Type I binder for Northern Type I climates, a Type II Binder for Central Type II climates, and a Type III binder for Southern Type III climates.
6. (Previously Presented) The interlayer of claim 1, wherein said interlayer is substantially impermeable.
7. (Previously Presented) The interlayer of claim 1, wherein said aggregate is comprised of no more than about 10% by weight natural sand.
8. (Previously Presented) The interlayer of claim 1, wherein said aggregate is comprised of no more than about 5% weight natural sand.
9. (New) The interlayer of claim 1, wherein said aggregate is comprised of about 66% by weight to about 99.8% by weight aggregate having a sieve size of less than about 4.75 mm.

10. (New) The interlayer of claim 1, wherein said aggregate is comprised of about 25% by weight to about 53.8% by weight aggregate having a sieve size of less than about 1.18 mm.